

Message Text

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PAGE 01 BOGOTA 07346 171456Z

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TAGS BGEN, CO

SUBJ: MAJOR PROJECTS: CHIVOR HYDROELECTRIC PROJECT-SECOND STAGE

REF STATE A-3450

MAJOR GROUP 99 CODE 9918102

1. ISA, INTERCONEXION ELECTRICA SA, A CORPORATION WHOSE MAIN PARTNERS ARE THE MAJOR POWER UTILITIES IN COLOMBIA HAS OBTAINED 49 MILLION DOLLAR CREDIT FROM IDB TO FINANCE CIVIL WORKS OF SECOND STAGE OF CHIVOR HYDROELECTRIC PROJECT.

2. CONTRACTS FOR CONSTRUCTION WORK WILL BE AWARDED ON THE BASIS OF INTERNATIONAL COMPETITIVE BIDDING. PREQUALIFICATION OF FIRMS

HAS ALREADY BEEN DONE BY ISA AND AMERICAN FIRM OF GUY F ATKINSON IS INCLUDED. FEASIBILITY STUDY AND DESIGN WAS DONE BY INGETEC, A COLOMBIAN FIRM.

3. TOTAL COST FOR SECOND STAGE OF PROJECT IS ESTIMATED AT 100 MILLION DOLLARS, OF WHICH AT LEAST 51 MILLION DOLS WILL BE FOR ACQUISITION OF MACHINERY AND EQUIPMENT. ISA EXPECTS TO OBTAIN CREDITS DIRECTLY FROM SUPPLIERS TO FINANCE PURCHASE OF EQUIPMENT. CONSTRUCTION WORK AND TYPES OF MACHINERY AND EQUIPMENT REQUIRED TO DEVELOP SUBJ PROJECT:

UNCLASSIFIED

UNCLASSIFIED

PAGE 02 BOGOTA 07346 171456Z

CIVIL WORKS:

(A) CONSTRUCTION OF A CONCRETE LINED CONVEYANCE TUNNEL OF 5,530 METERS LENGTH AND 5.40 METERS INTERNAL DIAMETER, ON ITS FIRST SECTION TUNNEL WILL HAVE A 4.0 METERS DIAMETER CONTROL BUTTERFLY VALVE.

B) CONSTRUCTION OF IMMERSSED POWER INTAKE STRUCTURE WHICH SHOULD BE BUILT DURING FIRST STAGE.

C) CONSTRUCTION OF 2,355 METERS LENGTH UNDERGROUND PRESSURE PIPING SYSTEM WHICH COMPRISES A CONCRETE LINED WELL WITH 240 METERS DEPTH AND 5.0 METERS DIAMETER AND A 10 PERCENT SLOPE TUNNEL WITH 2,115 METERS LENGTH AND A DIAMETER WHICH VARIES BETWEEN 5.0 AND 3.9 METERS. FIRST 540 METERS OF THIS TUNNEL WILL HAVE A CONCRETE LINED CIRCULAR SECTION WITH AN INTERNAL DIAMETER OF 5.0 METERS. REMAINDER WILL BE STEEL LINED WITH A DIAMETER OF 3.90 METERS. MOST OF TUNNEL IS TO BE BUILT IN SHALE VARYING FROM MEDIUM TO SOFT, FOR WHICH IT IS EXPECTED THAT A HEAVY SHOTCRETE LINING AND A CONSIDERABLE NUMBER OF STEEL ARCHES WILL BE REQUIRED AS TEMPORARY SUPPORT.

D) CONSTRUCTION OF POWERHOUSE WHICH SHALL HAVE A CONCRETE SUBSTRUCTURE CONTAINING FOUR TURBINES WITH ANCILLARY EQUIPMENT AND A STEEL SUPERSTRUCTURE FORMING THE MACHINE HALL WHICH WILL HOUSE FOUR 125 MW GENERATORS. A CORRIDOR ALONG THE MACHINE HALL, ADJACENT TO THE TRANSFORMER YARD, WILL HOUSE THE EXITATION CUBICLES AND OTHER AUXILIARY EQUIPMENT FOR THE GENERATORS.

E) A SECOND 230 KV DOUBLE CIRCUIT LINE 105 KM LONG, WILL BE BUILT FROM CHIVOR TO SUBA. THE ROUTE OF THE SECOND LINE WILL BE PARALLEL AND NEXT TO THE FIRST LINE, WHICH IS BEING BUILT WITH THE FIRST STAGE. AN EXPANSION OF THE SUBA SUBSTATION, INCLUDING ADDITIONAL TRANSFORMING CAPACITY HAS BEEN ASSUMED TO FORM A PART OF THE PROJECT.

EQUIPMENT AND MACHINERY REQUIREMENTS:

FOUR VERTICAL SHAFT IMPULSE TYPE TURBINES, TURBINE VALVES, FOUR 125 MW, SALIENT POLE, SYNCHRONOUS GENERATORS, PRESSURE PIPING, TRANSFORMERS PLUS A WIDE RANGE OF ELECTRIC EQUIPMENT SUCH AS CIRCUIT BREAKERS, DISCONNECTING SWITCHES, LIGHTNING ARRESTERS, UNCLASSIFIED

UNCLASSIFIED

PAGE 03 BOGOTA 07346 171456Z

WAVE TRAPS AND POTENTIAL DEVICES FOR COMMUNICATIONS AND PROTECTION, STEEL STRUCTURES, BUS BARS, INSULATORS, CONNECTORS, DOWNLEADS, CONTROL AND POWER CABLES, CONDUIT AND CONNECTION BOXES FOR SEVEN DAYS, ETC.

4. SELECTION OF FIRM FOR CONSTRUCTION WORKS WILL TAKE PLACE IN OCTOBER WHILE FIRST TENDERS FOR THE ACQUISITION OF EQUIPMENT SHOULD COME OUT IN EARLY 75.

5. ENTIRE CHIVOR PROJECT WHICH IS LOCATED NEAR SANTA MARIA VILLAGE IN THE DEPARTMENT (STATE) OF BOYACA, AT A DISTANCE BY ROAD OF ABOUT 160 KILOMETERS NORTHEAST OF BOGOTA WILL REGULATE THE FLOW OF THE BATA RIVER IN A RESERVOIR CREATED BY THE ESMERALDA DAM, UPSTREAM OF THE MOUNTAIN BARRIER FORMED BY THE ROCKS OF THE QUETAME FORMATION. THE RELATED FLOW OF THE BATA RIVER WILL BE DIVERTED THROUGH ABOUT 5,825 METERS OF TUNNEL AND 2,238 METERS OF PIPING TO THE POWERHOUSE LOCATED IN THE RIGHT SIDE OF THE LENGUPA RIVER, TO DEVELOP A NET HEAD OF 800 METERS. PROJECT WILL HAVE A TOTAL CAPACITY OF 1,000 MW DIVIDED INTO TWO STAGES OF 500 MW EACH. IT WILL BE THE FIRST ELECTRIC GENERATING PLANT UNDERTAKEN BY ISA UNDER THE PLAN FOR INTEGRATION OF HYDRAULIC RESOURCES OF COUNTRY'S CENTRAL ZONE. ON THE BASIS OF FEASIBILITY STUDIES WHICH WERE CARRIED OUT FROM 1962 TO 68 BY THE EMPRESA DE ENERGIA ELECTRICA DE BOGOTA, FINAL DESIGNS WERE PREPARED AND CONSTRUCTION OF FIRST STAGE (500 MW) WAS STARTED. WORKS ADVANCED SATISFACTORILY AND THEIR COMPLETION IS EXPECTED BY 75; TOTAL COST OF ENTIRE PROJECT IS ESTIMATED AT ABOUT 270 MILLION DOLLARS. FINANCING FOR FIRST STAGE, WHICH HAD A COST OF 170 MILLION DOLLS HAS BEEN COMPLETED AS FOLLOWS: 52 MILLION FROM WORLD BANK, 34 MILLION FROM IDB, 8 MILLION FROM FOREIGN COMMERCIAL BANKS, WITH THE BALANCE FINANCED WITH COLOMBIAN RESOURCES.

INTERESTED US FIRMS CAN CONTACT EITHER MR JAVIER RESTREPO, INGENIERO JEFE, DEPARTAMENTO DE PLANTAS OR MR GERMAN JARAMILLO, SUBGERENTE TECNICO, AT THE FOLLOWING ADDRESS:

INTERCONEXION ELECTRICA S.A. ISA
CALLE 37 NO. 8-43, PISO 10
APARTADO AEREO 12247
BOGOTA, COLOMBIA

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PAGE 04 BOGOTA 07346 171456Z

6. THE ABOVE INFORMATION WAS OBTAINED DIRECTLY FROM ISA AND FROM LOCAL NEWSPAPERS. VAKY

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